ASBESTOS

Vol. 6 MARCH 1925 No. 9

FURNISHING A COMMON VANTAGE GROUND WHERE THOSE INTERESTED IN ASBESTOS AND MAGNESIA MAY MEET FOR DISCUSSION

OUR AIM:

To be of Service to the Asbestos Industry.

Published by SECRETARIAL SERVICE

246 N. 17th Street Philadelphia, Pa.

ENTRANCE 1701 WINTER ST

... ASBESTOS ...

A MONTHLY MARKET JOURNAL

DEVOTED TO THE INTERESTS OF THE ASBESTOS AND MAGNESIA INDUSTRIES

A. S. ROSSITER - - - EDITOR

PUBLISHING OFFICE

246 NORTH 17th STREET

PHILADELPHIA, - PENNSYLVANIA

Entered As Second Class Matter November 23, 1923. at the Post Office at Philadelphia, Pennsylvania, Under Act of March 3, 1879

Volume VI | MARCH 1925 | Number 9

CONTENTS

SUBSCRIPTION PRICE

U. S., CANADA AND MEXICO	$1.00 PER YEAR
FOREIGN COUNTRIES	2.00 " "
SINGLE COPIES	.20 EACH

The Very Attractive Looking New Plant of the Asbestos Manufacturing Company at Huntingdon, Ind., of which R. J. Evans is General Manager. The Company Is Rapidly Equipping the Plant for the Manufacture of Brake Lining, Railroad Insulations and Other Asbestos Products.

EDITORIALS

Asbestos is the Most Important Mineral in the World

We don't know that anyone has ever claimed the men in the Asbestos business to be the most modest on earth, but it does seem that practically none of them have a true idea of the immense importance of Asbestos and the Asbestos Industry.

It isn't necessary here and now to review the many reasons for this importance; everyone in the Asbestos business knows that Asbestos is indispensable to Industry, to the comfort and safety of motorists, and to the pocket books of coal buyers, these three being only the beginning of a long list.

Everyone knows it. Yes! But apparently no one realizes it, and the Asbestos Industry has done very little toward imparting the knowledge to the general public.

Consider, for a moment, the condition existing in the insulation contract field. Here labor costs more than the insulation materials themselves. Does such a condition prevail in any other industry? Does the very low price of insulation, as compared with the very high price of labor tend to impress the consumer with the importance of Asbestos to him or to his heating plant?

When a jobber or a large consumer is ready to purchase Asbestos material, he finds that the sellers are quite ready to cut their price again and again. Does this impress on him the value of the material, and the importance of that material to industry? When he is next in the market, will he be likely to buy at the first price realizing that because of the importance of Asbestos, he is getting his money's worth at almost any figure?

A constantly fair price for a product of constantly good quality will go far toward convincing the public of the real worth of Asbestos.

Asbestos is the most important mineral in the world.

Do you realize it and do you try to impress that fact on your customers?

The Potential Market.

Recently we ran across mention of the use of *blue asbestos slag* when welding pipe joints, but upon consulting one of the asbestos firms likely to be interested, were told that the use would employ such small quantities of the material that it would not pay to exploit it.

This firm went on to say that they often find in the sale of Asbestos and Asbestos Products, a point of diminishing returns, which occurs when the expense and energy involved to exploit the use of the material is much larger than warranted by the extreme quantity which could possibly be put to such use. In other words the potential market is too small.

The potential market of any particular article is the very first thing to be considered by new firms, or men going into a new line. After the potential market has been very carefully reviewed and found sufficiently large, it is then time to go ahead with the development work, the organization of a company, building of a factory, etc.

Enthusiastic manufacturers, however, are prone to base figures for the potential market on the material that *could* be used, rather than on that which probably *would* be required. They are apt to consider the potential customer as eager to buy the product, when as a matter of fact, the customer may for one reason and another, absolutely refuse to be interested.

Another factor which is often overlooked when a survey of the potential market is made, is the quantity taken care of by competitors, and the quantity which could be taken care of by the actual capacity of competitors' plants. For illustration, let us take the automotive market. This market has increased so tremendously over the last ten years that many regard it as unlimited, and in putting some automobile accessory on the market often fail to consider that the present and potential capacities of factories already established may be equal to taking care of the wants of the automotive field in that particular accessory for years to come. Besides which the established factory is always better equipped to land the business than a new firm just starting out, likewise is better able to withstand finan-

cial storms, cut price waves, and the many other vicissitudes of business.

Unless you have something distinctly new and different of interest to the automobile industry, or to the motorist, unless your product is a vast, and demonstrable, improvement over those now on the market, it is well to carefully consider before entering the automotive field. And this applies equally to any other field, altho probably on a smaller scale.

In the March, 1925, issue of the Bulletin of Canadian Institute of Mining and Metallurgy will be found an article "Some Canadian Non-metallic Minerals—A Review of Fifteen Years Progress." Asbestos is one of the non-metallic minerals discussed. So far as we can see, the article contains nothing new.

The Canadian Textile Journal of January 30th contains an article on "African Asbestos Output 33,000 Tons."

The Canadian Mining Journal of issue February 13th contains a short article "South African Asbestos" which briefly describes a few of the South African deposits.

NINE "B'S"

Be pleasant—the voice with the smile wins.
Be reserved—a clattering tongue is dangerous.
Be cautious—don't experiment.
Be solvent—save a little every day.
Be a worker—drones have no honey.
Be open-hearted, open-minded, open-handed.
Be respectful—the world was here before you came.
Believe in yourself—you're all right.
Believe in your fellow-man—he's all right.

Asbestos is the most important mineral in the world.

The Manner of Making Incombustible Cloth from the Stone Amianthus, Spun into Threads

Editor's Note: Colonel J. J. Penhale of the Asbestos Corporation of Canada in looking over some very old magazines found this article in "The Gentleman's Magazine," Vol. XVII, A. D. 1745, and believing that the readers of "ASBESTOS" would be interested in it, sent it to us. The original as well as the copy we received uses the letter "f" instead of "s", an indication of its age. Since the use of "f" instead of "s" is most confusing to modern readers, we have not followed the original in this one particular.

An Epistolary Dissertation by J. Campani, of Rome, Master of the Briefs of Grace and Referendary, etc., Rome. Printed at the Reverend Apostolic Chamber's Printing Office, three Sheets in 4 to.

The author sends his friend a piece of the stone Amianthus, with a bit of cloth and some paper both made from the said stone, and gives him an account of what had been done, relating to the affair, in the Physico-mathematical academy kept many years in his house, also the method of spinning this incombustible substance. He premises many things concerning the names of this stone, from Pliny, Agricola, Pancirolius, and others, also concerning its various species as to colour, goodness, etc.

One kind of Amianthus is found in the island of Corsica, of a long figure, some fragments of which, of a woody appearance, are half a Roman palm in length, of whitish colour inclining to red. Another sort, of a leaden approaching to a silver colour, of a softer substance, and not exceeding a quarter of a palm, is frequently dug about *Sestri Di Ponente* in the State of Genoa. A third, and the least valuable species is found in Cyprus, consisting of coats, or scaly substances, one within another like an onion, of an earth colour inclining to black, sometimes intermixed with white, black, reddish or earthy spots and streaks, and scarce 1-72 of a palm in length. A fourth sort is dug in the Pyrenean mountains. This is as long as the Roman

palm, but consists of coarser and rougher filaments of threads; and lastly, a fifth kind, different from all these, is found in the mountains of Volaterre, in Tuscany.

Since many take Amianthus to be the same with the *alumen feiffle* (feathered alum) our author observes, from *Dioscorides,* that this stone, especially that found in Cyprus, very much resembles that alum; but shews from Agricola, Lib. 5, De Nat. Fossil, how much they differ in taste and that alum is astringent on the palate, but the Amianthus is only a little pungent to the tongue, without the least astringency. He shews also the mistake of those who imagine that the perpetual lamps of the ancients were made of oil extracted from this stone, with a wick of the same; for he found by experiment that a cupping glass filled with Amianthus, and subjected to the fire, yielded not the least quantity of oil, but only a few drops of thin aqueous humor, which would not take fire. Nor does he think the substance of this stone proper for a wick, because its parts are so extremely dry and minute, as to contain no pores capable of attracting and imbibing oil.

Before the stone is spun, it must be prepared in the following manner. First of all it must be steeped well in warm water and then it is to be work'd with the hands, squeez'd and spread abroad, to cleanse it from a very fine earth or lime, which strongly connects the filaments of the stone, and makes the water like milk; this is thrown away, and fresh water pour'd on the stone, which is work'd and press'd as before, that the soil may be thoroughly separated; for which purpose the operation is repeated 5 or 6 times, or oftener, not forgetting at every time to take the whole mass out of the vessel, and washing out the copious sediment at the bottom, till the staple becomes quite pure and free from heterogeneous particles, which done, it is spread abroad upon a mat, or basket, that the water may run thro', and the matter be the sooner dry'd.

After this preparation of the staple, the author shews two ways of spinning it. First they take two cards or combs with very slender teeth like those with which they card wool for hats or cloth, and having very finely carded the filaments with them, lay one on the other with wooly substance between them, so as that it may hang out. Then

taking a small slender spindle, with a little hook at top, and a whorl at bottom, that it may easily turn round, they thread the hook with a very fine thread; not forgetting to have by them in readiness a pot of oil for rubbing the inside of the tips of their fore finger and thumb, instead of spittle, as flax-spinners use, not only to preserve the skin from the excoriating quality of the filaments, but to mollify and supple them, and so make them fitter for spinning. They take then the thread in the spindle and join it to the carded filaments between the combs on a table, and incorporate them by twisting, which is a tedious and troublesome work. When the thread and filaments are sufficiently interwoven, tapes and filletings may be made of it, and even cloth, but this last the author says he never try'd. When the stuff is finished, it is first smear'd with oil, and then thrown into the fire, where it kindles in a moment, and the fire consumes the thread, leaving the rest bright, clean and untouch'd. The method above described differs not much from that used in Siberia.

The author next relates his own method; having observed that it was difficult to unite this incombustible tow with a thread, and that the shorter it was the more difficult it prov'd, instead of a thread he took flax, put it on a distaff as usual, then took 3 or 4 filaments of the incombustible tow, connecting them with those of the flax, by twisting, and so formed a woof of a firmer contexture for weaving. Hence there appears no need of cards, which too much tear and shorten the filaments of the Amianthus. You need only place the filaments on a table, and divide them into small hairy threads to twist them up with the flax.

To Make Paper of the Amianthus

When this stone is thoroughly washed and cleansed from the lime some of its parts will remain at the bottom of the vessel. These being shorter than any of the rest, and on that account unfit for spinning, are most proper for paper, which is made of them after the common method.

After the Amianthus is spun and weaved great care must be taken in time to preserve it, for its extreme dryness renders it apt to crumble into dust when it is handled. A piece of cloth, therefore, or any other stuff made of the Amianthus must often be smeared over with oil, which is

highly serviceable in preserving the stone, and in a manner demonstrates its incombustibleness. For by this it is the sooner kindled, and blazes into a flame, which continues till the oil is totally consumed; whence the cloth or stuff, which before burning appeared foul and nasty with oil, becomes after the combustion clean and bright. It must be oiled afresh every time you repeat the operation and also when you lay it aside for its preservation.

Thus far Signor Campini, whose method of intermixing the filaments of Asbestus, or Amianthus, with those of common flax, was before suggested in the Philosophical Transactions by Dr. Plot, in some remarks concerning a piece of incombustible cloth, imported from China, which he probably conjectures to be made of the stone Amianthus. But whether the cloth made of such threads will, after the consumption for the intermixed flax, be firm enough for such uses, as the ancients are known to have made of their incombustible cloth, is to be doubted.

Pliny affirms, that he had seen napkins of it taken foul from the table after a great feast, cast into the fire, by which they were better scoured, and look'd fairer and clearer than napkins washed in water; and of these might be made shrouds to preserve the bodies of princes from the ashes of the funeral piles in which they are burned.

A gentleman in Wales has lately had some paper made of the Amianthus found there, but we know not his method of preparing it.

To facilitate the spinning short filaments of this stony substance, it might be proper to try a method of carding that has been practised for spinning by a machine cotton, from sorts of hair, and any wool, silk, etc., of a short staple. The cards are not like those in the figure annexed, but have crooked teeth, and the under card has them in rows with a vacancy between for making the carded stuff into rolls, which are put round a turning cylinder, which has another over it, and regulates the delivery of the carded rolls. But this method will require a very minute and particular description and several copper cuts.

Asbestos is the most important mineral in the world.

MARKET CONDITIONS

General Conditions.

Improvement in general business can be noted in almost every direction. The fact that improvement is not as rapid as some optimistically disposed people thought it would be, is no reason for being discouraged with such improvement as has actually developed, in fact just the reverse for the gradual movement indicates that caution is being used.

Forbes expresses this thought characteristically as follows:

"Those who have been rather too enthusiastically expecting the rapid development of something in the nature of a boom in business undoubtedly must expect to be disappointed in actual developments, but conservatively-minded forecasters have all along discouraged unrestrained optimism and have predicted nothing more than a gradual tho substantial improvement ..... Looking ahead, there is every reason to remain confident that as the season advances business will consolidate its gains and enter the Spring with definitely better prospects than have prevailed in many months."

There are, of course, some businesses which have not responded very loudly to the call of progress. You may know someone in a certain line who declares that business is bad and is getting worse. But it is a question whether this condition is not the fault of the particular business represented, or the people in it. At any rate such cases should be treated as individual instances and not considered as the general trend.

To illustrate this very point, we know of one or two firms in Philadelphia who are actually laying off men, but, in contradistinction to this, the employment agencies in this same city report an increased number of calls for skilled and unskilled laborers, and add that in their opinion the condition is not temporary but nearer to permanence than at any time within the last two years.

To uphold such optimism as may be found in the above paragraphs, we point to the increased building, the gradual increase in automobile production, both considerable factors in making business good or bad. Undoubtedly the bad weather has affected both these industries to a very con-

siderable extent, but with the skies now smiling upon us, both the building and automotive industries should show tremendous upward strides. A jobber of auto accessories in New York, wrote to a manufacturer the other day: "This nice order is the result of *one fairly pleasant day* in New York."

As to Asbestos:

The only exciting thing which has occurred in the Asbestos business during the past month is the action of one Canadian Mine Operator in voluntarily increasing the wages of its men 8 1-3%. Up until time of going to press the other mines have not followed the example set.

The price tendency on raw material is upward. We cannot at this writing say just how strong the tendency will prove to be or whether it will continue rapidly or slowly, *but we believe it will continue.*

The merger is still in the air—it may be closed within the next few weeks, or it may take much longer. Our personal opinion is that it will not be closed quickly.

In the various manufactured lines demand is fair. The chief trouble in the manufactured lines is that the present capacity of factories is much larger than normal, healthy demand is likely to be for some time to come. This is due, of course, to expansion (over-expansion perhaps) during the war period. Naturally, such a condition is almost directly responsible for the price situation in manufactured goods. In trying to make demand equal their individual capacity, manufacturers sell at prices disastrous to the whole asbestos industry. When demand catches up to capacity, either thru normal growth of business, or thru intensive action on the part of the manufacturers, prices will right themselves—probably not before.

To give a purely personal opinion we have a feeling, a belief, or a hunch, whatever you prefer to call it, that the Asbestos business is gradually improving. We can see this improvement reflected in somewhat improved conditions in our own business. The improvement may be very slow; it may not be at all satisfactory to many, but we believe it will continue.

Asbestos is the most important mineral in the world.

Sir Samuel Turner

It is safe to say that no man ever connected with Asbestos is better known thruout this world-wide Industry, than was Sir Samuel Turner. Not many, however, know that he was the original inventor of Asbestos Packing.

At the time of his death, August 11th, 1924, he was probably the oldest pioneer in the Asbestos Industry, having been actively interested in Asbestos for almost fifty-five years, for it was in 1870 that he took out a patent, the first, we believe, ever issued on asbestos packing for steam engines.

SIR SAMUEL TURNER

Sir Samuel was born at Rochdale, February 25th, 1840, thus being in his 85th year at the time of his death. His father, Mr. Samuel Turner, founded the great cotton manufacturing business, still carried on by Messrs. Samuel Turner and Company, Limited, at Spotland, in 1856.

Sir Samuel left the old village school at Spotland at the age of eleven, and began his business life as errand boy for a chemist's shop. Later he went into the Rochdale Canal Company's office in Drakestreet, and afterwards became an apprentice at Robert and David Howarth's engineering works in Whitworth Road. It was at this last named place that he acquired his engineering training which was really the cause for his later success.

When in his early twenties he entered his father's cotton business. Having been trained as a mechanical engineer and possessing some inventive ability, he interested himself in making various experiments with the machinery in his father's business. After many months of experiment he invented asbestos packing, and as soon as he was able to actually produce a packing that was indestructible by heat the demand for the material became out of all proportion to the supply. It was necessary for Sir Samuel to devote his whole time to the making of this new material. A partnership was formed under the title Turner Brothers, to carry on the production and sale of the packing, but Sir Samuel took sole charge of it, leaving his brothers, Councillor Robert Turner, J. P., and the late Alderman John Turner, J. P., to continue the cotton business.

Sir Samuel's invention of asbestos packing was really the beginning of the commercial asbestos industry. The Government adopted it for use in the Navy; other Governments on the Continent did likewise. For a long time, of course, Turner Brothers had a monopoly on the product. Later other asbestos materials were produced, until now, Turner Brothers produce practically every known Asbestos material and enjoy a world-wide trade.

Business interests took up so much of his time that it was only in later life, after his nephews, Mr. S. Turner and Mr. Rupert Turner (sons of Councillor Robert Turner) entered the business, that Sir Samuel found time to devote to the interests of his fellowman. He served many positions of public trust and honor during the last thirty years of his life. While Mayor of Rochdale, he made the princely gift of Falinge Park to the town, the park having originally an area of 18 acres. Later he added five more to it. He had the interests of Rochdale much at heart and the town

was the recipient of many other perhaps less striking, but very valuable gifts.

Sir Samuel was greatly interested in charity, contributing liberally to many worthy causes. In politics he was a lifelong Liberal; in religion a keen Nonconformist, and had been associated with Methodism at Bailliestreet all his life. He was a magistrate for both borough and county, having been appointed to the Rochdale borough bench in 1902.

As a man, Sir Samuel possessed a quiet courage, large ability. He was bold and enterprising and, as everyone knows, rose to a position of great wealth and influence. His possessions, however, did not spoil him, for he was the embodiment of genialty and good sense, approachable by men of all classes.

Asbestos is the most important mineral in the world.

Improved Field Coil Insulation for Large Salient-Pole Machines

By R M. Casper, *Power Engineering Department, Westinghouse Electric and Manufacturing Company*[1]

The problem of making a field coil capable of meeting the severe operating requirements of large salient pole machines has been solved very skillfully by means of an improved type of field coil insulation. This type of insulation is suitable for both straw-wound and wire or ribbon-wound coils.

In the case of the bare copper strap coil, the strap is first bent to shape on a special adjustable bending machine. Steel plates are inserted between turns at the corners to prevent skewing of the turns and the bulge caused by bending is pressed out with the copper cold by means of a hydraulic press. Each turn of the coil is then closely inspected and all rough spots are filed smooth. The coil is then ready for the insulation between turns. A coating of air-drying shellac is then applied to both sides of each turn After the shellac has thoroly dried, two strips of thin *asbestos paper*, each coated on one side with shellac, are placed between turns.

In the next operation the coil is held in form by heavy metal sizing plates, heated by circulating current to drive out all moisture and volatile matter, and is then pressed to size under heavy pressure. After the coil has become cool, the exposed edges of the *asbestos* and shellac are scraped and filed flush with the copper, and the coil is then coated with shellac.

Special attention is given to the insulation between the pole and the copper. Several sheets of flexible hand-built mica are placed on the inside wall of the coil and turned down over the top and bottom edges. These mica sheets are reinforced by a sheet of heavy *asbestos cloth*, which is

1. Reprinted from the January issue of the Electrical Journal.

folded under the turned down portion of the mica around the top and bottom of the coil. A heavy coating of liquid bakelite is applied to the coil, which is then heated under high pressure until the bakelite hardens, forming a solid molded coat of insulation surrounding the inside, top and bottom of the coil where it comes in contact with the pole piece. The coils are further insulated from the pole piece by special insulating washers, which are built up from several thicknesses of duck treated with bakelite and pressed into shape. In the case of wire or ribbon wound coils, the coils are treated first with insulating compounds which are not affected by the temperatures or pressures which the coils undergo in the process of manufacture. The cell or ground insulation is then applied in the same manner as on the strap wound coils.

Asbestine and Its Utilization in the Paper and Chemical Industry

Abstracted by Albert P. Sachs, Technical Director, Universal Trade Press Syndicate

Ernest Altmann in the Chemiker Zeitung writes an article on the above subject of which we give an abstract.

Asbestine is a double silicate of lime and magnesia, a feather light mineral product which is a valuable filler. Asbestine renders paper opaque and gives it a satiny pleasant surface. The best results are obtained not by adding the asbestine directly to the stuff in the hollander, but by mixing it with the rosin soap or rosin milk and then adding it to the hollander. In this manner sizing is economized.

Good grades of asbestine possess, in addition to the fibrous structure, a considerable amount of air spaces. This is of value in making inexpensive blotting papers, consisting not of rags or highly cooked cellulose, but of cheaper

fibres combined directly with the fibres to be cooked in the digester. Straw, with 10 to 20% high grade asbestine was cooked under pressure in a digester. On account of the air spaces the asbestine attached to the fibres directly and intimately and gave them an absorptive power. The better grade absorptive papers, such as filter paper and copying paper, require no fillers as the fibres have sufficient absorptive power; however, poorer fibres such as reeds, bamboo, waste clippings, sedges, etc., can be utilized for the same purpose with the addition of asbestine. These properties have been taken advantage of previously in the U. S. A. with material called "fibre talc." Fibre talc is excellent for illustration print, book paper, note paper and especially tapestry paper as the colors show up very well. Asbestine has also been used for cardboard especially those requiring a high luster such as jacquard cards or insulating paper. For playing cards and vulcanization fibre plates, asbestine is a rival for blanc-fixe.

In deresinifying pulp in the digester 10 to 20% asbestine may be added; the resin which separates adheres to the asbestine. It also knocks down the foam if added to strongly foaming half stuff.

It is a good polishing material for gold and silver objects. A good fire-fighting foaming product can be made using asbestine. A good sizing, especially for photographic boxes contains 25% asbestine. A light imitation stone containing neither stone nor cement can be made containing up to 25% asbestine. It feels warm to the feet and has numerous obvious uses. It can be used in making plasters, modelling waxes, etc. A dental modelling wax tinted light carmine and appropriately perfumed consists of 25 parts stearic acid, 25 parts copal gum and 50 parts asbestine.

In the chemical industry quartz and alumina filtering plates are used. Their porosity is limited. By the use of asbestine with the addition of alkali and acid resistant fusion products, a matter can be produced which, burned at temperatures above 1400° C. has the properties of filtercel plates.

Asbestos is the most important mineral in the world.

Favorite Sayings of Prominent Asbestos Men

No side stepping, cards on the table. *A. M. Ehret, President, Ehret Magnesia Mfg. Company.*

* * *

You can catch more flies with molasses than with vinegar. *Walter R. Leventritt, President, Asbestos & Mineral Corporation.*

* * *

One would think some sales managers received their early training in the Distribution Department of the Salvation Army, as they seem to be engaged in distributing the assets of their corporations as quickly as possible. *J. Gillmur Tyson, President, American Asbestos Company.*

* * *

Build and maintain your reputation by fair dealing, and you will have an asset that is priceless. We have been at it nearly thirty years. *William H. Huber, M. D., Secretary and Treasurer, Asbestos Fibre Spinning Company.*

* * *

Work—more than you ought to—until you forget it's a duty. *Werner Geerts, Chief Clerk, L. Scheerders-Van Kerchove Asbestos Cement Works, Sint-Niklaas-Waas, Belgium.*

* * *

That's that! Now for the next. *George L. Hammons, President, United States Asbestos Co. of Illinois, Chicago.*

* * *

Save up your money;
Get your pockets full of rocks,
And you'll always have tobacco
In your old tobacco box.

—*C. M. Clarke, President, Sall Mountain Company.*

CONTRACTORS AND DISTRIBUTORS PAGE

SUGGESTED FORM OF CONTRACT

The following form of contract between sub-contractor and contractor has been adopted and recommended for general use by the Builders' Exchange of Philadelphia. We suggest that all insulation contractors send us their comments on this form, particularly as to how it fits their own needs.

THIS AGREEMENT, made the.....in the year one thousand nine hundred and.....by and between.....party of the first part (hereinafter designated the Sub-Contractor), and..... ....party of the second part (hereinafter designated the Contractor).

WITNESSETH, that the Sub-Contractor, in consideration of the fulfillment of the agreements herein made by the Contractor, agree with the said Contractor as follows:

Article I. The Sub-Contractor shall and will provide all the materials and perform all the work for the.....as shown on the drawings and described in the specifications prepared by ..... Architect, which drawings and specifications are identified by the signatures of the parties hereto, and become hereby a part of this contract.

Article II. It is understood and agreed by and between the parties hereto that the work included in this contract is to be done under the direction of the said Architect, and that.....decision as to the true construction and meaning of the drawings and specifications shall be final. It is also understood and agreed by and between the parties hereto that such additional drawings and explanations as may be necessary to detail and illustrate the work to be done are to be furnished by said Architect, and they agree to conform to and abide by the same so far as they may be consistent with the purpose and intent of the original drawings and specifications referred to in Article I.

Article III. No alterations shall be made in the work except upon written order of the Contractor; the amount to be paid by the Contractor or allowed by the Sub-Contractor by virtue of such alterations to be stated in said order. Should the Contractor and Sub-Contractor not agree as to amount to be paid or allowed, the work shall go on under the order required above, and in case of failure to agree, the determination of said amount shall be referred to arbitration, as provided for in Article XII of this contract.

Article IV. The Sub-Contractor shall provide sufficient, safe and proper facilities at all times for the inspection of the work by the contractor or....authorized representatives; shall, within twenty-four hours after receiving written notice from the Contractor to that effect, proceed to remove from the grounds or buildings all materials condemned by.....whether worked or unworked, and to take down all portions of the work which the Contractor shall by like written notice condemn as unsound or improper, or as in any way failing to conform to the drawings and specifications, and shall make good all work damaged or destroyed thereby.

Article V. Should the Sub-Contractor at any time refuse or neglect to supply a sufficiency of properly skilled workmen, or of materials of the proper quality, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the agreements herein contained, such refusal, neglect or failure being certified by the Architect, the Contractor shall be at

liberty after.....days' written notice to the Sub-Contractor, to provide any such labor or materials, and to deduct the cost thereof from any money then due or thereafter to become due to the Sub-Contractor under this contract; and if the Architect shall certify that such refusal, neglect or failure is sufficient ground for such action, the Contractor shall also be at liberty to terminate the employment of the Sub-Contractor for the said work and to enter upon the premises and take possession, for the purpose of completing the work included under this contract, of all materials, tools and appliances thereon, and to employ any other person or persons to finish the work, and to provide the materials therefor; and in case of such discontinuance of the employment of the Sub-Contractor..... shall not be entitled to receive any further payment under this contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expense incurred by the Contractor in finishing the work, such excess shall be paid by the Contractor to the Sub-Contractor; but if such expense shall exceed such unpaid balance, the Sub-Contractor shall pay the difference to the Contractor. The expense incurred by the Contractor as herein provided, either for furnishing materials or for finishing the work, and any damage incurred thru such default, shall be audited and certified by the Architect.

Art. VI. The Sub-Contractor shall complete the several portions, and the whole of the work comprehended in this agreement by and at the time or times hereinafter stated, to wit:

.....

Art. VII. Should the Sub-Contractor be delayed in the prosecution or completion of the work by the act, neglect or default of the Contractor, of the Architect, or of any other sub-contractor employed by the Contractor upon the work, or by any damage caused by fire or other casualty for which the Sub-Contractor..... not responsible, or by general strikes or lockouts caused by acts of employees, then the time herein fixed for the completion of the work shall be extended for a period equivalent to the time lost by reason of any or all the causes aforesaid, which extended period shall be determined and fixed by the Architect; but no such allowance shall be made unless a claim therefor is presented in writing to the Contractor within forty-eight hours of the occurrence of such delay.

Art. VIII. The Contractor agrees to provide all labor and materials essential to the conduct of this work not included in this contract in such manner as not to delay its progress, and in the event of failure so to do, thereby causing loss to the Sub-Contractor, agrees that.....will reimburse the Sub-Contractor for such loss; and the Sub-Contractor agrees that if.....shall delay the progress of the work so as to cause loss for which the Contractor shall become liable, then.....shall reimburse the contractor for such loss. Should the Contractor and Sub-Contractor fail to agree as to the amount of loss comprehended in this Article, the determination of the amount shall be referred to arbitration as provided in Article XII of this contract.

Art. IX. It is hereby mutually agreed between the parties hereto that the sum to be paid by the Contractor to the Sub-Contractor for said work and materials shall be..... subject to additions and deductions as hereinbefore provided, and that such sum shall be paid by the Contractor to the Sub-Contractor, in current funds, as follows:.....The final payment shall be made within.....days after the completion of the work included in this contract.

Art. X. It is further mutually agreed between the parties hereto that no payment made under this contract, except the final payment, shall be conclusive evidence of the performance of this contract, either wholly or in part, and that no payment shall be construed to be an acceptance of defective work or improper materials.

Art. XI. The Contractor agrees during the progress of the

work that full insurance on said work shall be maintained in..... own name, against loss or damage by fire.....The policies shall cover all work incorporated in the building and all materials for the same in or about the premises, and shall be made payable to the parties hereto, as their interests may appear.

The Sub-Contractor agrees to indemnify the Contractor against all claims or demands for damages arising from accidents to person or property occasioned by the said Sub-Contractor or..... employees during the performance of this contract.

Art. XII. In case the Contractor and Sub-Contractor fail to agree in relation to matters of payment, allowance or loss referred to in all Articles of this contract, or should either of them dissent from the decision of the Architect referred to in Article VII of this contract, which dissent shall have been filed in writing with the Architect within ten days of the announcement of such decision, then the matter shall be referred to a Board of Arbitration to consist of one person selected by the Contractor and one person selected by the Sub-Contractor, and these two to select a third. The decision of any two of this Board shall be final and binding on both parties hereto. Each party hereto shall pay one-half of the expense of such reference.

Art. XIII. The said parties for themselves, their heirs, successors, executors, administrators and assigns, do hereby agree to the full performance of the covenants herein contained.

IN WITNESS WHEREOF, The parties of these presents have hereunto set their hands and seals, the day and year first above written.

In Presence of

(Seal)
(Seal)

Building Statistics

As was to be expected, particularly in view of the very severe weather conditions which prevailed generally thruout the United States during January, building contracts awarded decreased quite a bit from the December awards. The December figures were 10,419 projects, (or 12,319 buildings), 53,625,309 square feet of floor space and a value of $327,985,900. During January contracts were awarded for 8,677 projects (10,464 buildings), 48,536,200 square feet of floor space, valued at $296,473,000.

During the week of March 2nd, there were issued in Philadelphia permits for the building of 679 houses, which was the highest figure for any one week in the history of the Bureau of Building Inspection. A partial cause for this was the permit for 197 houses issued to Burton C. Simon, real estate, and another for 102 houses to be built by Shapiro & Reed, builders. The whole month of January showed permits for only 408 dwellings.

NOW THAT SPRING IS COMING

Mrs. Newlywed (to patient husband who has been planting the flowerbed) "John dear, you'll have to dig up that poppy seed you planted this morning. I've decided to have poppies on the other side of the garden."

Asbestos is the most important mineral in the world.

This page devoted each month to discussion of brake lining activities by A. A. Mowbray, Commissioner of the Asbestos Brake Lining Association

Automotive jobbers, service stations, garages and brake lining experts continue to show undiminished interest in the National Brake Inspection Movement, the country-wide campaign designed to impress upon the motoring public the importance of brake examinations by competent mechanics at regular intervals.

The movement is benefiting the entire industry, altho not designed to advertise any particular brand of asbestos brake lining, manufacturer, jobber or dealer. Indeed, the success of the drive has been largely attributed to the fact that brake lining has been kept out of the picture, all of the publicity matter being aimed at the necessity of brake inspection at regular intervals.

Letters received by members of the Asbestos Brake Lining Association from their jobbers, service stations and garages advise that today motorists are giving more attention to the upkeep of their brakes than ever before in the history of the industry. Thousands of dealers have requested supplies of the association literature, which includes window trims, booklets, gummed slogan stickers, brake inspection certificates, tags, etc.

Altho in existence only two years, the National Brake Inspection Movement has already resulted in hundreds of cities, towns and villages being induced to stage "test your brakes" weeks. During the past year alone, more than 165 cities, towns and villages, including 39 different states and the District of Columbia, were having automobile brakes examined. In most of these communities an entire week was given over to the drive, while in some places the authorities initiated a series of regular examinations.

The first city to officially test brakes was New York where the Department of Public Safety, under the leadership of Marcus Dow, past president of the National Safety Council, assigned a special squad to examine automobile control apparatus every day. In New Orleans, La., the brakes of all motor vehicles are tested twice a year, as a result of an ordinance passed by the city council. Several states have statutes calling for brake examinations and some cities have special rulings affecting brake tests. The State Motor Vehicle Registrars of several States, including New York, Pennsylvania, Massachusetts, New Jersey, have instructed their inspectors to give particular attention to the condition of the brakes of the cars they examine.

Motorists in practically every city have actually welcomed

the introduction of "test your brakes" weeks, as nobody wants to become involved in accidents, many of which are caused by faulty brakes. Hundreds of daily newspapers, trade, technical and class periodicals have published editorials praising the campaign.

Full details regarding methods of staging special drives may be obtained from the association which is located at 17 W. 42nd St., New York City.

Automobile Production

The February number gave figures for automobile production during the years 1923 and 1924, but neglected to state that these figures covered both Canada and the United States.

During January, 1924, there were produced in the United States and Canada, 212,908 passenger cars and 28,004 trucks, or a total of 240,912. Of this total the United States produced 204,607 passenger cars, 26,464 trucks, while Canadian production totaled 8,301 passenger cars and 1,540 trucks.

Preliminary figure for February production puts the total for that month at 277,600 (15% ahead of January) this figure covering both passenger cars and trucks.

Consumption of the product of American automobile factories by countries outside of the United States reached 14½% of the total in December, which is a new high record. The average for the year is over 12%, and the actual number of American vehicles purchased by the foreign countries during the year was 456,000— Natl. Auto Chm. of Commerce.

Edward F. Loomis, Secretary of the Motor Truck Committee, National Automobile Chamber of Commerce, recently spent three weeks visiting various truck manufacturing plants, and states that manufacturers are both expecting and planning for a volume of business during 1925 considerably in excess of that obtained in 1924. The U. S. manufacturers produced 358,296 trucks during 1924.

HIS BUSINESS CARD

"How did that fellow get into the boss' private office?"
"Threw a cork over the transom."

Louisville Courier Journal.

Canada.

The preliminary statement prepared by the Department of Mines, Province of Quebec, showing shipments and stocks on hand of Asbestos for the year 1924, is received only a few days before we go to press. We give the figures below and in April will publish a graph showing the comparisons between production in Canada and that of other Asbestos producing countries, the figures having been received too late to give us time for having graph drawn.

SHIPMENT AND SALES

	1923			1924		
	Tons	Value	Av. per Ton	Tons	Value	Av. per Ton
Crude No. 1	400	$ 189,215	$472.60	871	$ 318,761	$365.97
Crude No. 2	2,743	650,845	237.29	3,350	721,165	215.27
Crude Run of Mine	636	112,468	176.86	222	34,730	156.44
Spinning Fibre.	11,417	1,408,518	123.37	9,799	1,085,918	110.81
Shingle Fibre ..	16,153	921,546	57.05	21,569	973,356	45.12
Paper Stocks and Others ..	185,455	4,081,668	22.01	172,751	3,427,729	19.84
Total	216,804	$7,364,260	$33.97	208,562	$6,561,659	$31.37
Asbestic	16,171	17,794	1.18	16,464	9,934	.60
Total	232,975	$7,382,054		225,026	$6,571,593	

STOCKS ON HAND

	December 31, 1923			December 31, 1924	
	Tons	Value	Av. per Ton	Tons	Value*
Crude No. 1	1,462	$ 671,698	$459.43	1,387	$ 507,600
Crude No. 2	2,532	605,091	238.97	1,801	387,701
Crude Run of Mine..	567	123,581	217.95	547	85,573
Spinning Fibre	9,772	1,207,525	123.57	7,634	845,924
Shingle Fibre	11,606	670,941	57.81	6,432	290,212
Paper Stock and Others	18,425	315,396	17.11	23,565	467,530
Total	44,364	$3,594,332		41,366	$2,584,540

*** Values calculated at average price per ton for the year as above.**

Quantity of rock mined during 1923 was 3,747,576 tons; during 1924, 3,324,727 tons of rock were mined.

ASBESTOS

Rhodesia.[1]

	November 1924 Tons	Value
Bulawayo District—		
Nil Desperandum (Afr. Asb. Min. Co., Ltd.) ..	276	£ 3,316
Pangani (J. S. Hancock)	30	342
Shabanie (Rho. & Gen. Asb. Corp., Ltd.)	607	15,160
Shabanie (Adjustments for year ended Mar. 31, 1924)	...	20,813
Victoria District—		
King (Rho. & Gen. Asb. Corp., Ltd.-	379	9,477
Gaths (Rho. & Gen. Asb. Corp., Ltd.)	650	12,997
	1,942	£62,105

Union of South Africa.[2]

	November 1924 Tons	Value
Transvaal	93	£ 855
Cape	230	3,165
	323	£4.020

1. Figures published by Rhodesia Chamber of Mines.

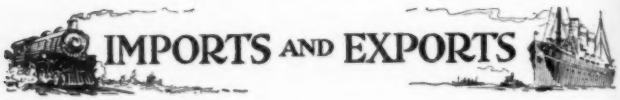
2. Figures published by Department of Mines and Industries for the Union of South Africa.

Colonel Penhale in sending us the article "The Manner of Making Incombustible Cloth from the Stone Amianthus" included the following short article which was discovered by him at the same time.

An Account of a Description of Iceland, and Greenland. By M. John Anderson, printed at Hamburg 1746, 8vo. 328 Pages, and five plates.

The Amianthus, says he, which M. Egede discover'd in Groenland, is found in Siberia, where it is made into small pieces of incombustible cloth. They begin with hammering it, and so reducing it to a wool; then they dip it in cold water, and work it with the hands, repeating this operation till the earth is quite washed from it, and the threads appear free and distinct. After this they dry the separated threads, work them with a pair of cards almost like cotton, they spin it, wetting the fingers with oil instead of water, and the weaver finishes the piece.

A thing done right today, means less trouble tomorrow.



Imports into the U. S. A.

Unmanufactured Asbestos:

From	December 1923 Tons	Value	December 1924 Tons	Value
Africa (Br. South) ..	66	$ 4,949	29	$ 8,989
Africa (Port.)	279	49,020	134	27,500
Canada	16,479	496,686	15,446	502,747
England	58	5,470	...	....
Germany	..	75	...	....
	16,882	$556,200	15,609	$539,236

From	Total for 1923 Tons	Value	Total for 1924 Tons	Value
Africa (Br. South) ..	250	$ 33,206	929	$ 100,194
Africa (Port.)	1,745	313,202	1,361	262,988
Canada	181,045	6,686,364	161,759	5,156,851
England	1,571	376,306	372	67,201
Other Countries	257	32,858	139	14,640
	184,868	$7,441,936	164,560	$5,601,874

The material coming from Canada during December, 1924, consisted of 727 tons Crude valued at $142,277; 6,058 tons Mill Fibre, valued at $244,878; 30 tons Stucco, valued at $450; and 8,631 tons other grades valued at $115,142. Material from the Africas was all Crude.

Manufactured Asbestos:

Yarn—	December 1924 Pounds	Value	Total for 1924 Pounds	Value
England	...	...	3,742	$ 3,031
Germany	760	964	1,532	1,728
Belgium	...	...	9,629	1,019
Total	*760*	*$964*	*14,903*	*$5,778*
Fabrics, Woven—				
England	797	305	70,018	27,793
Canada	8	26	95	174
Netherlands	...	...	360	76
Scotland	...	...	1,013	259
Total	*805*	*$331*	*71,486*	*$28,302*
Packing, Fabric—				
England	2,062	583	6,693	3,593

France	...	...	200	281
Canada	...	...	87,346	2,456
Germany	...	...	2,027	384
Total	*2,062*	*$583*	*96,266*	*$6,714*
Packing, Not Fabric—				
Austria	...	...	53,307	12,063
France	...	...	40	36
England	...	...	5,814	1,598
Canada	...	...	4	2
Germany	...	...	503	320
Total	...	...	*59,668*	*$14,019*
Paper and Millboard—				
Canada	336	29	155,998	5,249
France (entering Porto Rico)	...	...	478	1,795
Total	*336*	*$29*	*156,476*	*$7,044*
Shingles, Slate, Wood and Lumber—				
Belgium	166,662	3,299	4,866,646	70,199
Germany	162,262	2,534	416,387	13,522
Canada	14,637	1,819	184,279	12,040
Netherlands	...	...	34,048	527
France	...	...	30,000	776
Italy	...	...	24,010	664
Total	*343,561*	*$7,652*	*5,555,370*	*$97,728*
Asbestos Cement—				
Canada	...	...	146,605	1,310
Netherlands	...	...	44,143	1,318
Italy	...	...	1,400	18
England	...	...	1,857	434
Total	...	...	*194,005*	*$3,080*
Other Manufactures—				
Belgium	15,491	469	13,295,490	241,251
France	236,869	18,091	281,717	20,831
Germany	223	345	27,600	1,839
Netherlands	63,778	3,412	423,616	11,815
England	9,869	3,832	513,989	61,325
Canada	4,447	152	99,270	2,171
Italy	...	...	112,067	1,198
Austria	...	...	1,694	636
Sweden	...	...	5	24
Total	*330,677*	*$26,301*	*14,755,448*	*$341,090*
Grand Total All Manufactures	678,201	$35,860	20,903,622	$503,755

ASBESTOS

Imports of Manufactured Asbestos for the month of December, 1923, amounted to 1,302,048 pounds, valued at $32,261.00. For the year, 1923, 15,020,594 pounds were imported, valued at $398,842.00

Exports from U. S. A.

Exports of unmanufactured asbestos for the month of December, 1924, amounted to 106 tons, valued at $15,675. During December, 1923, 11 tons, valued at $2,051 were exported.

Exports of unmanufactured asbestos for the year of 1924 amounted to 1,134 tons, valued at $93,163, while the 1923 figure was 607 tons, valued at $48,525.

Exports of manufactured asbestos goods:

	December 1924		Total for Year 1924	
	Pounds	Value	Pounds	Value
Paper, mlbd. and rlbd.	201,647	$13,534	2,171,674	$124,228
Pipe Covering and Cement	271,116	18,088	4,848,030	288,266
Textiles, Yarn and Packing	96,244	61,546	1,197,508	788,361
Magnesia and Manufacturers of	240,824	22,670	3,120,070	243,579
Asbestos Roofing	4,063 sqs.	23,312	48,838 sqs.	297,900
Other Manufactures	136,368	39,878	2,728,741	787,461

Exports of Raw Asbestos from Canada.

	December 1924		Total for Year 1924	
	Tons	Value	Tons	Value
United Kingdom	480	$ 28,235	6,614	$ 374,680
United States	6,437	341,676	72,233	3,904,161
Australia	...	....	473	24,130
Austria	...	....	...	.....
Belgium	220	9,500	2,798	150,065
France	680	50,200	5,640	452,151
Germany	1,169	91,345	9,133	785,703
Italy	1,031	56,762	2,439	151,778
Japan	625	33,263	9,222	358,596
Netherlands	120	10,600	1,068	88,580
Other Countries	...	....	110	7,975
Total	*10,762*	*$621,581*	*109,730*	*$6,297,819*
Sand and Waste—				
United Kingdom	369	6,458	3,100	53,983
United States	8,394	100,414	89,582	1,123,231
Belgium	...	....	60	1,200
France	60	1,200	325	6,270

Germany	220	3,800	1,408	25,055
Other Countries	25	500	544	9,531
Total	*9,068*	*$112,372*	*95,019*	*$1,219,270*
Grand Total	19,830	$733,953	204,749	$7,517,089

Imports and Exports by England.

Imports of raw material for December, 1924, compared with those for December, 1923:

	December 1923		December 1924	
	Tons	Value	Tons	Value
From Rhodesia	872	£26,553	731	£21,995
From Canada	199	2,485	1,343	16,640
From Other Countries	756	21,647	265	11,004
Total	1,827	£50,685	2,339	£49,639

Total imports of raw material for the years 1923 and 1924:

	1923		1924	
	Tons	Value	Tons	Value
From Rhodesia	9,235	£293,944	11,026	£347,962
From Canada	3,779	57,246	8,473	117,010
From Other Countries	6,334	188,062	3,728	89,909
Total	19,348	£539,252	23,227	£554,881
Re-exports	8,531	£316,096	5,868	£188,671

Exports of Asbestos Manufactures for December, 1924, compared with those for December, 1923:

	December 1923		December 1924	
	Tons	Value	Tons	Value
To Netherlands	120	£ 5,925	58	£ 3,864
To France	27	11,420	57	11,699
To U. S. A.	10	2,044	8	1,220
To British India	170	7,006	153	7,795
To Other Countries	1,572	58,841	731	50,248
Total	1,899	£85,236	1,007	£74,826

Total exports of manufactured asbestos for the year 1924, compared with those for 1923:

	1923		1924	
	Tons	Value	Tons	Value
To Netherlands	430	£ 39,284	429	£ 46,260
To France	366	111,466	556	149,538
To U. S. A.	105	32,017	107	24,974
To British India	1,415	89,627	1,439	86,630
To Other Countries	10,273	558,771	11,425	649,448
Total	12,589	£831,165	13,956	£956,850

NEWS OF THE INDUSTRY

Birthdays. Our birthday list this month includes A. J. Bromberg, Secretary, Asbestos Textile Company, March 19th; M. E. White, Treasurer, Norristown Magnesia & Asbestos Company, March 21st; John F. Bolger, Vice-President, Allbestos Corporation, March 27th; A. S. Farmer, President & Treasurer, Conneross Yarn Mill, April 3rd; A. W. Jack, President, A. W. Jack Corporation, April 8th. We extend hearty congratulations and best wishes.

Asbestos Corporation of Canada, Limited. The annual report of the Asbestos Corporation of Canada, Limited, has been published, and our readers may be interested in their published balance sheet as of December 31, 1924:

ASSETS

Property Account (less Reserves):	
Representing Plant and Equipment as appraised Dec. 1916, and subsequent additions, less deductions...	$1,872,951.80
Mineral Areas and Real Estate	7,266,949.12
Royal Trust Company:	
Sinking Fund Cash in hands of Trustee.....	6,524.49
Other Amounts deposited in terms of Trust Deed....	1,178.93
Investments:	
Dominion Government Bonds	1,209,486.16
Company's Own Bonds and other Securities	773,006.50
Current Assets:	
Inventories of Asbestos Materials and Supplies.....	763,580.68
Accounts and Bills Receivable	263,337.51
Cash	216,484.88
Deferred Charges to Operations	41,259.45
	$12,414,759.52

LIABILITIES

Capital Stock:		
Six Per Cent. Participating Preferred—Authorized and Issued—40,000 Shares, $100 each.....		$4,000,000.00
Common: Authorized and Issued—30,000 Shares, $100 each		3,000,000.00
First Mortgage Thirty Year Five Per Cent. Sinking Fund Gold Coupon Bonds—Authorized, $5,000,000.00		
Issued $3,000,000.00		
Less: Purchased and held for Sinking Fund by Trustee	259,800.00	
		2,740,200.00
Current Liabilities:		
Accounts Payable and Payrolls		185,656.39
Accrued Liabilities		1,948.81
Preferred Dividend paid Jan. 15, 1925.....		60,000.00
Common Dividend payable Feb. 15, 1925		60,000.00
Reserves:		
For Contingencies and Government Taxes		104,485.24
Surplus		2,262,469.08
		$12,414,759.52

D. Gray Maxwell, 171 W. 12th Street, New York City, has a full set of "ASBESTOS" from the July 1919 number to date, which he will dispose of at a reasonable price. Mr. Maxwell has

left the Asbestos business and is therefore no longer interested in the Industry or its magazine.

Ralph L. Fuller Associates, Rockefeller Building, Cleveland, O., manufacturers agents for chemicals, fire brick, steel mill and foundries supplies, etc., expect shortly to expand their lines to include various Asbestos Products.

Asbestos in 1923 is the title of a pamphlet published February 9, 1925, by the U. S. Geological Survey. The pamphlet was prepared by Edward Sampson of the U. S. Geological Survey.

Asbestogard has been registered by Bell's United Asbestos Company, Ltd., of London, as their trade mark on Asbestos prepared for preventing the radiation of heat.

Thomas D. Stone recently resigned as Vice President and Director of Nightingale & Childs Company, which position he had held for the past nine years, and has established the Stone Industrial Equipment Company with main office at Springfield, Mass., and branches at Roxbury, Mass., Wallingford, Conn., Brooklyn, N. Y. and New York City.

The Company will handle engineering specialties, import insulating materials, such as asbestos products, asbestos shingles and corrugated lumber, cork products, veneered woods on asbestos backing, and ornamental tile; also diatomaceous earth from Sweden.

Mr. Stone would appreciate receiving prices and catalogs from insulation manufacturers and engineering specialty houses both in the United States and abroad. Communications should be addressed to him at Springfield, Mass.

W. G. Ross, President, Asbestos Corporation of Canada, sailfor Europe on the Olympic on Saturday, March 7th, for a two months holiday.

Johns-Manville, Inc. Balance Sheet as of December 31st, 1924, as compared with that of December 31st, 1923.

ASSETS	1923	1924
Land, bldgs. and equip. (after depreciation reserve)	$8,683,142.00	$8,757,517.00
Cash	1,633,334.00	1,148,456.00
Government Securitie	..	1,394.00
Accounts Receivable	5,257,142.00	4,486,910.00
Notes Receivable	402,931.00	255,959.00
Inventories	3,621,435.00	4,654,219.00
Investments	7,787,515.00	2,843,473.00
Due from sub.	2,785,689.00	1,556,283.00
Waukegan Inventory	.....	.....
Total	$30,171,188.00	$23,704,211.00
LIABILITIES		
Capital Stock	*$12,500,000.00	$12,460,450.00
Preferred Stock	.....	.....
Accounts Payable	870,291.00	635,247.00
Accrued Liabilities	610,535.00	694,256.00
Federal Tax Reserve	300,000.00	430,000.00
Surplus	15,890,362.00	9,484,258.00
	$30,171,188.00	$23,704,211.00

* Represented by 250,000 no par shares.

ASBESTOS

The Asbestos Manufactures Co., Ltd., has recently been formed as a private company (capital £1,000) to carry on in the United Kingdom and elsewhere the manufacture and handling of asbestos and asbestos products, including asbestos crudes and fibres, non-conducting coverings, hair felt coverings, lagging, braiding, engine and pump packings, brake linings, sheetings, slates, tiles, roofing and lining, insulating and building materials, together with various rubber materials. The permanent directors are J. S. Grimason and L. I. Mortlock. The registered office is at 36, Victoria St., Westminster, S. W. 1.

Johns-Manville, Inc., under date of March 1st consolidated their Albany Branch with the Syracuse Branch, under the management of A. M. O'Reilley, formerly manager of the Albany Office. Mr. C. O. Murphy will be in charge of the Albany Office under Mr. O'Reilley.

Smith-Murray Corporation has been formed by Mr. F. Gordon Smith, who for the past fourteen years has been associated with Johns-Manville, Inc., as Manager of their Syracuse Branch. Mr. Smith resigned on March 1st to organize his own company, which will distribute roofing, flooring and building materials made by Johns-Manville, Inc. The headquarters of the Smith-Murray Corporation will be Syracuse, N. Y.

Johns-Manville, Inc. The Employees of the Syracuse Branch of Johns-Manville, Inc., on March 6th, entertained F. Gordon Smith at a dinner given in his honor, Mr. Smith having resigned the management of Johns-Manville's Syracuse Branch on March 1st. During the dinner, Mr. Smith was presented with a handsome mantle clock as a token of the men's appreciation and esteem.

Raybestos Sales Aids, is the title of a pamphlet recently issued by The Raybestos Company, with the object of informing their representatives, distributors, etc., the advertising methods and media to be employed during 1925 for the advertising of Raybestos Products. Booklets, window cards, national, farm, trade and newspapers will be used extensively. Thirty-one ads will appear during the year in the Saturday Evening Post.

PATENTS

Brake Band Liner, Punching, Countersinking and Riveting Apparatus. No. 1,524,927. Granted on February 3rd to Anthony Hagen, San Diego, Calif. Filed November 27, 1923. Serial No. 677,317. Described as an apparatus including a support, yieldable guide means mounted on said support, a punching and countersinking member mounted on said support in alignment with said guide means, a riveting means in connection therewith and lever and link means connected with said punching and countersinking means and with said riveting means for simultaneously operating the same.

Fireproofing and Insulating Composition. No. 1,524,676. Granted on February 3rd to Edward R. Stowell, Portland, Ind., assignor one-half to Charles M. Mayo, Indianap lis, Ind. Filed

October 23, 1922. Serial No. 596,508. Described as a plastic fireproofing and insulating composition comprising a mixture of substantially four parts finely divided wood particles, one part kieselguhr, one part sodium silicate, two parts water, two and a half parts small stone aggregate such as slate, marble dust or fine sand for strengthening purposes, and mixing same with 10 to 30% of cement.

Gasket. No. 1,524,682. Granted on February 3rd to Claude B. Bailey, Wyandotte, Mich. Filed Sept. 1, 1921. Serial No. 497,702. Described as a gasket comprising a metallic body portion formed to provide two tubular guide flanges on opposite sides of an outwardly extending section, forming an annular chamber, a ring of fibrous material in said chamber and each guide flange having a connected flange on the inside thereof, for strengthening and holding the same against bending.

Wooden Lining for Brake and Transmission Bands. No. 1,527,142. Granted on February 17th to David E. Kortz and Claude S. Milne, Denver, Colo. Filed March 10, 1923. Serial No. 626,318. Described as a lining for brake and transmission bands formed of long fibre soft wood, said lining having grooves extending both transversely and longitudinally of the operative face of the band and a wick threaded thru said lining from face to face and lying in certain of said grooves for absorbing oil.

ANSWER TO FEBRUARY PUZZLE

■	O	P	A	L	■	K	I	M	S	■
O	■	A	M	I	A	N	T	E	■	P
B	C	■	E	L	S	E	S	■	F	A
I	R	E	■	A	B	E	■	G	I	N
■	U	R	N	■	E	■	P	U	B	■
■	D	I	G	■	S	■	O	A	R	■
B	E	N	■	A	T	E	■	M	E	T
A	S	■	S	N	O	W	S	■	S	O
G	■	C	E	N	S	E	R	S	■	N
■	M	O	T	E	■	S	O	O	T	■

BUYERS CLASSIFIED INDEX

Being a listing of those firms whose products are of particular interest to those in the Asbestos Industry.
Rate for listing supplied on application.
We hope to gradually make this listing of great value to our readers.

ASBESTOS TEXTILE MACHINES

WHITIN MACHINE WORKS, Whitinsville, Mass.